Results of Directional Survey

API number:	30-025-40570				
OGRID:		Operator:	COG PRODUCTION, LLC		
		Property:	EATA FAJITA STATE		# 2H

surface	ULSTR:	E	08	T	24S	R	33E
				190	FSL	2105	FWL
BH Loc	ULSTR:	H	08	T	24S	R	33E
15410	MD	11124.5	TVD	597	FNL	2056	FWL
				4683	FSL		
Top Perf/OH	ULSTR:	E	08	T	24S	R	33E
11255	MD	11088.8	TVD	533	FSL	2104	FWL
Bot Perf/OH	ULSTR:	H	08	T	24S	R	33E
15310	MD	11126.5	TVD	696	FNL	2059	FWL
				4584	FSL		

	MD	N/S	E/W	VD
	11224	312.90	0.00	11080
TOP PERFS/OH	**11255**	342.60	-0.70	11088.80
	11255	342.60	-0.70	11088.80
	15284	4367.50	-45.40	11126.70
BOT PERFS/OH	**15310**	4393.50	-46.18	11126.47
	15351	4434.50	-47.40	11126.10

NEXT TO LAST	15351	4434.50	-47.40	11126.10
LAST READING	15405	4488.40	-49.10	11124.60
TD	**15410**	4493.39	-49.26	11124.46

Surface Location	190	FS	2105	FW
Projected BHL	4683	FS	2056	FW
Location of				
Top Perfs/OH	533	FS	2104	FW
Bottom Perfs/OH	4584	FS	2059	FW

SUMMARY of Subsurface Locations

Surface Location	E-08-24S-33E	190	FS	2105	FW	Vert. Depth
Top Perfs/OH	E-08-24S-33E	533	FS	2104	FW	11088.80
Bottom Perfs/OH	H-08-24S-33E	4584	FS	2059	FW	11126.47
Projected TD	H-08-24S-33E	4683	FS	2056	FW	11124.46

APR 07 2014

OPERATOR COG OPERATING, LLC

WELL/LEASE Eata Fajita St #2-H

COUNTY LEA Co., NM

STATE OF NEW MEXICO
DEVIATION REPORT

290	0.60
701	0.50
1001	0.50
1174	0.69
1348	0.30
2064	0.10
2348	0.10
2660	0.40
2861	1.00
3144	1.40
3427	2.10
3711	0.90
3995	0.60
4278	1.50
4561	1.70
4845	3.60
4945	3.20
5300	1.80
5864	1.00
6150	0.30
6464	0.30
6764	0.70
7197	0.50
7480	0.80
7793	0.60
8136	0.80
8408	1.00
8703	1.70
8797	1.80
8983	1.70
9367	1.40
9651	2.30
10022	0.90
10360	1.00
10627	4.00

HOBBS OCD

MAR 19 2014

RECEIVED

SIGNED BY: _____

RON SCNADOLARI, VP-CONTRACT DRILLING

STATE OF TEXAS
COUNTY OF MIDLAND

ON THIS 31 DAY OF December , 2013, BEFORE ME, R SOWELL, A NOTARY PUBLIC, PERSONALLY APPEARED RON SCANDOLARI, WHO ACKNOWLEDGED AND EXECUTED THIS DOCUMENT. WITNESS MY HAND AND OFFICIAL SEAL.

(SEAL)

NOTARY PUBLIC STATE OF TEXAS
REDA DENISE SOWELL
My Commission Expires
November 02, 2017

Reda Denise Sowell
NOTARY PUBLIC

VES
VAUGHN ENERGY SERVICES
A GYRO TECHNOLOGIES INC. COMPANY

P.O. Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

HOBBS OCD

MAR 19 2014

RECEIVED

January 7, 2014

COG Operating LLC (Concho)
One Concho Center
600 W. Illinois Avenue
Midland, TX 79701

Attn: Kanicia Castillo

Re: **Eata Fajita State No 002H**

Please find enclosed a copy of the survey from 0' to 10,535' ran on the above referenced well.

If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 7th day of January A.D., 2014, by Keith Havelka.

Meredith Darden
Notary Public, State of Texas

MEREDITH DARDEN
Notary Public, State of Texas
My Commission Expires
July 25, 2017

Company: COG Operating LLC-Concho
Lease/Well: Eata Fajita State/No 002H
Location: Sec 8 T24S R33E
Rig Name: Basic 46
State/County: New Mexico/Lea
Latitude: 32.23, Longitude: -103.60
GRID North is 0.39 Degrees East of True North
VS-Azi: 0.00 Degrees

Depth Reference : RKB = 22 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: ...tate #2h gyro survey-de_01.ut
Minimum Curvature Method
Report Date/Time: 1/7/2014 / 10:05

Vaughn Energy Services
West Texas
Surveyor: Chris Bankson
432-563-5444

Eata Fajita State No 002H / API 30-025-40570

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.23	277.28	100.00	0.03	-0.20	0.03	0.20	277.28	0.23
200.00	0.22	301.70	200.00	0.15	-0.56	0.15	0.58	285.05	0.10
300.00	0.22	35.20	300.00	0.41	-0.61	0.41	0.74	303.85	0.32
400.00	0.52	102.76	400.00	0.47	-0.06	0.47	0.47	352.75	0.48
500.00	0.41	183.13	499.99	0.01	0.36	0.01	0.36	88.03	0.60
600.00	0.39	227.40	599.99	-0.58	0.09	-0.58	0.58	171.20	0.30
700.00	0.53	237.22	699.99	-1.06	-0.55	-1.06	1.20	207.59	0.16
800.00	0.46	252.26	799.99	-1.44	-1.33	-1.44	1.96	222.84	0.15
900.00	0.24	300.90	899.98	-1.45	-1.90	-1.45	2.39	232.56	0.35
1000.00	0.25	308.68	999.98	-1.21	-2.24	-1.21	2.55	241.70	0.03
1100.00	0.50	288.70	1099.98	-0.93	-2.83	-0.93	2.98	251.74	0.28
1200.00	0.24	268.22	1199.98	-0.80	-3.45	-0.80	3.54	256.96	0.29
1300.00	0.52	272.99	1299.98	-0.78	-4.11	-0.78	4.19	259.24	0.29
1400.00	0.35	315.76	1399.97	-0.54	-4.79	-0.54	4.82	263.61	0.36
1500.00	0.18	22.05	1499.97	-0.17	-4.95	-0.17	4.95	268.01	0.33
1600.00	0.39	27.12	1599.97	0.27	-4.73	0.27	4.74	273.28	0.21
1700.00	0.21	14.15	1699.97	0.75	-4.53	0.75	4.60	279.41	0.19
1800.00	0.36	333.14	1799.97	1.21	-4.63	1.21	4.79	284.65	0.25

VES Survey Date: 12/18/2013

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.40	245.98	1899.97	1.35	-5.09	1.35	5.27	284.86	0.52
2000.00	0.34	226.23	1999.96	1.00	-5.63	1.00	5.72	280.10	0.14
2100.00	0.49	229.59	2099.96	0.52	-6.17	0.52	6.19	274.80	0.15
2200.00	0.27	255.96	2199.96	0.18	-6.72	0.18	6.72	271.58	0.28
2300.00	0.14	297.07	2299.96	0.19	-7.06	0.19	7.06	271.50	0.18
2400.00	0.06	301.98	2399.96	0.27	-7.21	0.27	7.22	272.13	0.09
2500.00	0.33	296.67	2499.96	0.42	-7.51	0.42	7.52	273.22	0.27
2600.00	0.37	325.28	2599.96	0.81	-7.94	0.81	7.99	275.85	0.18
2700.00	0.56	9.43	2699.95	1.56	-8.05	1.56	8.20	280.96	0.39
2800.00	0.83	20.85	2799.95	2.72	-7.71	2.72	8.17	289.41	0.30
2900.00	0.91	27.81	2899.93	4.10	-7.08	4.10	8.18	300.05	0.13
3000.00	1.07	18.94	2999.92	5.68	-6.41	5.68	8.56	311.55	0.22
3100.00	1.27	20.27	3099.90	7.60	-5.72	7.60	9.51	323.03	0.21
3200.00	1.47	27.73	3199.87	9.78	-4.74	9.78	10.87	334.15	0.27
3300.00	1.67	37.01	3299.83	12.08	-3.27	12.08	12.51	344.87	0.32
3400.00	2.32	33.65	3399.77	14.93	-1.27	14.93	14.98	355.15	0.66
3500.00	1.50	37.41	3499.72	17.65	0.65	17.65	17.66	2.11	0.83
3600.00	0.71	52.23	3599.70	19.07	1.94	19.07	19.17	5.80	0.83
3700.00	1.07	55.40	3699.68	19.98	3.20	19.98	20.24	9.09	0.36
3800.00	1.53	62.01	3799.66	21.14	5.15	21.14	21.76	13.68	0.49
3900.00	1.74	80.39	3899.62	22.02	7.82	22.02	23.37	19.56	0.56
4000.00	0.65	71.91	3999.59	22.45	9.86	22.45	24.52	23.72	1.10
4100.00	0.66	60.03	4099.59	22.92	10.91	22.92	25.38	25.45	0.14
4200.00	0.55	59.78	4199.58	23.45	11.82	23.45	26.26	26.75	0.11
4300.00	1.39	51.62	4299.57	24.44	13.19	24.44	27.77	28.35	0.85
4400.00	2.12	60.17	4399.52	26.11	15.74	26.11	30.49	31.08	0.77
4500.00	1.85	79.05	4499.46	27.34	18.92	27.34	33.25	34.69	0.70
4600.00	1.75	95.39	4599.41	27.50	22.03	27.50	35.24	38.70	0.52
4700.00	1.94	100.82	4699.36	27.04	25.22	27.04	36.97	43.00	0.26
4800.00	2.92	101.30	4799.27	26.22	29.38	26.22	39.38	48.26	0.98
4900.00	3.03	110.97	4899.13	24.77	34.35	24.77	42.35	54.20	0.51
5000.00	2.50	121.71	4999.02	22.68	38.67	22.68	44.84	59.61	0.74
5100.00	1.82	125.67	5098.95	20.61	41.82	20.61	46.62	63.77	0.69
5200.00	1.58	129.63	5198.90	18.80	44.17	18.80	48.01	66.94	0.27
5300.00	1.28	123.78	5298.87	17.30	46.16	17.30	49.30	69.45	0.33
5400.00	1.15	118.03	5398.85	16.21	47.98	16.21	50.64	71.33	0.18
5500.00	1.67	114.96	5498.82	15.12	50.19	15.12	52.42	73.23	0.53
5600.00	1.77	110.52	5598.77	13.97	52.96	13.97	54.77	75.23	0.17
5700.00	0.80	108.97	5698.75	13.20	55.07	13.20	56.63	76.52	0.98

VES Survey Date: 12/18/2013

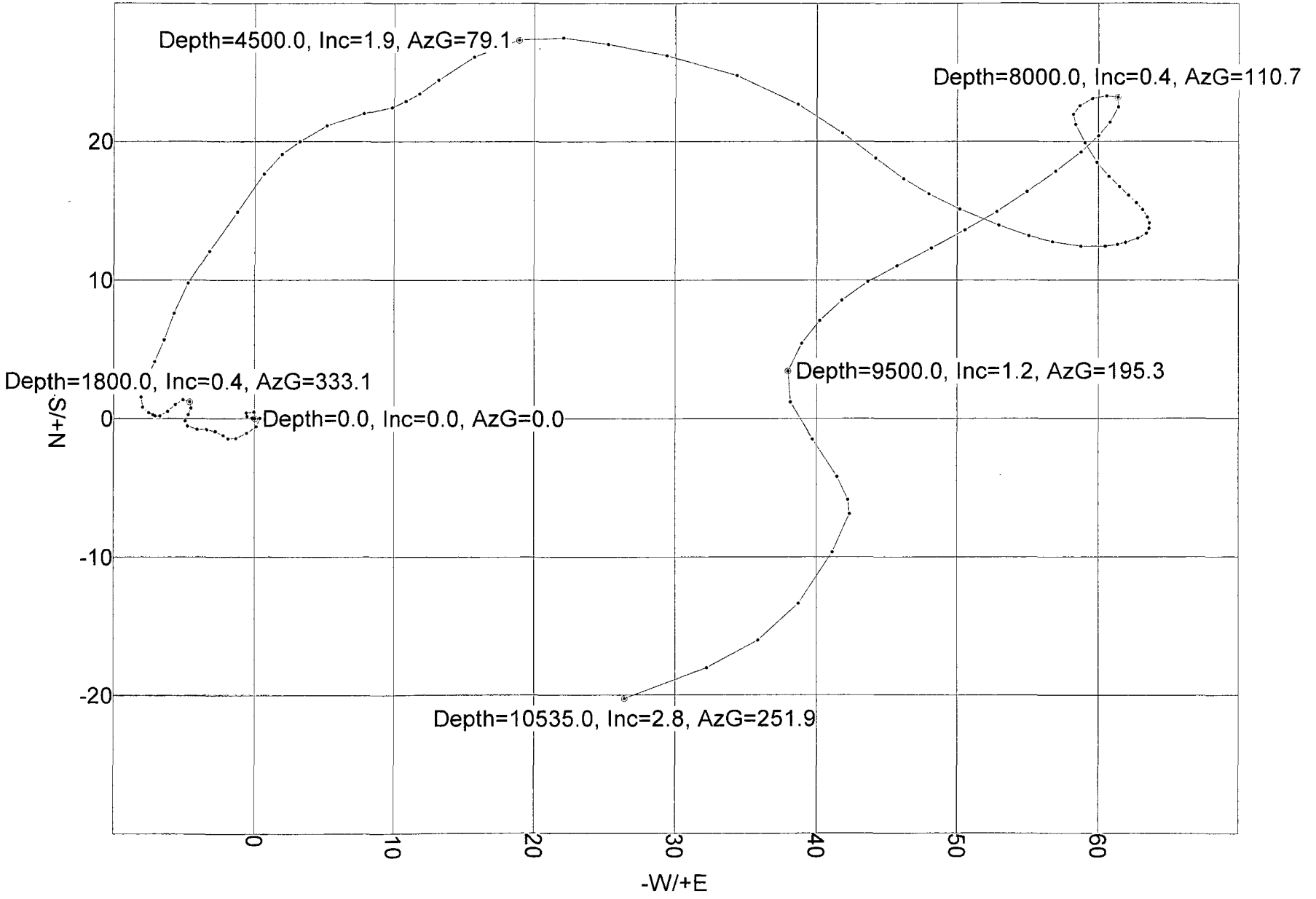
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	1.19	101.43	5798.73	12.76	56.74	12.76	58.16	77.32	0.41
5900.00	1.15	96.85	5898.71	12.44	58.75	12.44	60.05	78.05	0.10
6000.00	0.84	80.62	5998.70	12.44	60.47	12.44	61.74	78.38	0.42
6100.00	0.16	81.37	6098.69	12.58	61.33	12.58	62.61	78.41	0.67
6200.00	0.50	74.29	6198.69	12.72	61.89	12.72	63.19	78.39	0.33
6300.00	0.56	66.71	6298.69	13.03	62.76	13.03	64.10	78.27	0.09
6400.00	0.24	46.51	6398.68	13.37	63.36	13.37	64.75	78.09	0.34
6500.00	0.25	12.55	6498.68	13.73	63.56	13.73	65.03	77.81	0.14
6600.00	0.20	352.02	6598.68	14.11	63.58	14.11	65.13	77.48	0.10
6700.00	0.32	333.48	6698.68	14.54	63.43	14.54	65.08	77.09	0.15
6800.00	0.41	322.79	6798.68	15.08	63.09	15.08	64.87	76.56	0.11
6900.00	0.34	315.77	6898.68	15.58	62.67	15.58	64.57	76.04	0.08
7000.00	0.55	314.07	6998.67	16.12	62.11	16.12	64.17	75.45	0.21
7100.00	0.48	313.64	7098.67	16.74	61.47	16.74	63.71	74.76	0.07
7200.00	0.72	316.01	7198.66	17.48	60.73	17.48	63.20	73.94	0.25
7300.00	0.78	324.00	7298.66	18.48	59.90	18.48	62.68	72.85	0.12
7400.00	1.11	332.64	7398.64	19.89	59.05	19.89	62.31	71.38	0.36
7500.00	0.60	335.42	7498.63	21.23	58.39	21.23	62.13	70.02	0.52
7600.00	0.31	14.68	7598.63	21.97	58.24	21.97	62.24	69.34	0.41
7700.00	0.60	47.55	7698.62	22.58	58.69	22.58	62.89	68.96	0.38
7800.00	0.61	71.79	7798.62	23.10	59.58	23.10	63.90	68.81	0.25
7900.00	0.54	86.40	7898.61	23.29	60.56	23.29	64.88	68.96	0.16
8000.00	0.40	110.74	7998.61	23.20	61.36	23.20	65.60	69.29	0.24
8100.00	0.74	204.71	8098.61	22.48	61.42	22.48	65.40	69.89	0.87
8200.00	0.69	213.20	8198.60	21.39	60.82	21.39	64.47	70.62	0.12
8300.00	0.78	225.07	8298.59	20.41	60.01	20.41	63.38	71.21	0.17
8400.00	1.19	228.19	8398.58	19.24	58.75	19.24	61.82	71.87	0.42
8500.00	1.41	235.17	8498.55	17.85	56.97	17.85	59.70	72.61	0.27
8600.00	1.46	232.73	8598.52	16.37	54.94	16.37	57.33	73.41	0.08
8700.00	1.49	239.01	8698.49	14.93	52.82	14.93	54.89	74.22	0.16
8800.00	1.52	240.84	8798.45	13.62	50.55	13.62	52.35	74.92	0.06
8900.00	1.61	242.25	8898.41	12.32	48.15	12.32	49.70	75.65	0.10
9000.00	1.53	242.28	8998.38	11.04	45.72	11.04	47.03	76.43	0.08
9100.00	1.18	238.59	9098.35	9.88	43.66	9.88	44.76	77.25	0.36
9200.00	1.46	230.67	9198.32	8.54	41.79	8.54	42.66	78.45	0.33
9300.00	1.02	221.96	9298.30	7.07	40.22	7.07	40.83	80.03	0.48
9400.00	1.38	214.76	9398.28	5.43	38.94	5.43	39.31	82.07	0.39
9500.00	1.20	195.31	9498.25	3.43	37.98	3.43	38.13	84.85	0.47
9600.00	1.50	160.08	9598.23	1.18	38.14	1.18	38.16	88.22	0.86

VES Survey Date: 12/18/2013

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9700.00	2.11	142.18	9698.18	-1.50	39.72	-1.50	39.75	92.17	0.83
9800.00	1.57	153.88	9798.12	-4.19	41.46	-4.19	41.67	95.78	0.66
9900.00	0.52	158.43	9898.11	-5.85	42.23	-5.85	42.63	97.89	1.06
10000.00	0.68	184.17	9998.10	-6.87	42.35	-6.87	42.90	99.21	0.31
10100.00	2.84	208.62	10098.05	-9.64	41.12	-9.64	42.23	103.19	2.24
10200.00	2.24	218.26	10197.95	-13.35	38.72	-13.35	40.96	109.03	0.74
10300.00	2.27	235.29	10297.87	-16.02	35.88	-16.02	39.29	114.05	0.67
10400.00	2.51	246.13	10397.79	-18.03	32.25	-18.03	36.95	119.21	0.51
10535.00	2.79	251.86	10532.64	-20.25	26.42	-20.25	33.29	127.46	0.28

VES Survey Date: 12/18/2013

Vaughn Energy Services
West Texas
Surveyor: Chris Bankson
432-563-5444
Eata Fajita State No 002H / API 30-025-40570



VES Survey Date: 12/18/2013

COG Operating LLC

Lea County, NM
Eata Fajita State
#2H

OH

Survey: MWD #1

Standard Survey Report

26 December, 2013

Company:	COG Operating LLC	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3611.3usft (Original Well Elev)
Site:	Eata Fajita State	**MD Reference:**	WELL @ 3611.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project	Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Eata Fajita State				
Site Position:		**Northing:**	446,468.40 usft	**Latitude:**	32° 13' 31.198 N
From:	Map	**Easting:**	726,689.60 usft	**Longitude:**	103° 36' 0.988 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.39 °

Well	#2H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	446,706.30 usft	**Latitude:**	32° 13' 33.455 N
	+E/-W	0.0 usft	**Easting:**	728,133.00 usft	**Longitude:**	103° 35' 44.166 W
Position Uncertainty		2.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,589.3 usft

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/26/2013	7.30	60.12	48,369

Design	OH				
Audit Notes:					
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	359.18	

Survey Program **Date** 12/26/2013

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	10,535.0	GYRO (OH)	MWD	MWD - Standard
10,627.0	15,405.0	MWD #1 (OH)	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,535.0	2.79	251.86	10,532.6	-20.2	26.4	-20.6	0.00	0.00	0.00
KOP - 10535.0 'MD, 2.79° INC, 251.86° AZI									
10,627.0	4.00	322.50	10,624.5	-18.4	22.3	-18.7	4.40	1.32	76.78
10,658.0	7.30	334.70	10,655.4	-15.7	20.8	-16.0	11.27	10.65	39.35
10,689.0	11.10	333.00	10,686.0	-11.3	18.6	-11.5	12.29	12.26	-5.48
10,721.0	14.90	335.50	10,717.1	-4.8	15.5	-5.0	12.00	11.88	7.81
10,752.0	17.90	340.50	10,746.9	3.3	12.3	3.2	10.69	9.68	16.13
10,784.0	20.30	346.90	10,777.1	13.4	9.4	13.2	9.94	7.50	20.00
10,815.0	23.10	352.00	10,805.9	24.6	7.3	24.5	10.88	9.03	16.45
10,847.0	26.20	355.00	10,835.0	37.9	5.8	37.8	10.44	9.69	9.38

Company:	COG Operating LLC	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3611.3usft (Original Well Elev)
Site:	Eata Fajita State	**MD Reference:**	WELL @ 3611.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,878.0	30.10	357.10	10,862.3	52.5	4.8	52.4	12.98	12.58	6.77
10,909.0	34.70	356.50	10,888.5	69.1	3.9	69.0	14.87	14.84	-1.94
10,941.0	38.80	356.50	10,914.1	88.2	2.7	88.1	12.81	12.81	0.00
10,972.0	41.50	357.70	10,937.8	108.1	1.7	108.1	9.06	8.71	3.87
11,004.0	44.80	359.90	10,961.2	130.0	1.3	130.0	11.33	10.31	6.88
11,035.0	48.40	0.60	10,982.5	152.5	1.4	152.5	11.73	11.61	2.26
11,067.0	51.50	0.50	11,003.0	177.0	1.6	177.0	9.69	9.69	-0.31
11,098.0	54.50	359.80	11,021.7	201.8	1.7	201.7	9.84	9.68	-2.26
11,130.0	58.00	359.40	11,039.5	228.4	1.5	228.3	10.99	10.94	-1.25
11,161.0	61.80	359.20	11,055.0	255.2	1.2	255.1	12.27	12.26	-0.65
11,192.0	66.60	358.80	11,068.5	283.1	0.7	283.0	15.53	15.48	-1.29
11,224.0	71.30	358.60	11,080.0	312.9	0.0	312.9	14.70	14.69	-0.63
11,255.0	75.60	358.60	11,088.8	342.6	-0.7	342.6	13.87	13.87	0.00
11,286.0	77.00	358.80	11,096.2	372.7	-1.4	372.7	4.56	4.52	0.65
11,318.0	78.70	359.00	11,102.9	404.0	-2.0	404.0	5.35	5.31	0.63
11,350.0	80.80	359.40	11,108.6	435.5	-2.5	435.5	6.68	6.56	1.25
11,381.0	83.10	359.00	11,112.9	466.2	-2.9	466.2	7.53	7.42	-1.29
11,413.0	84.70	359.80	11,116.3	498.0	-3.2	498.0	5.58	5.00	2.50
11,445.0	86.00	359.80	11,118.9	529.9	-3.3	529.9	4.06	4.06	0.00
11,476.0	87.60	359.00	11,120.7	560.8	-3.7	560.8	5.77	5.16	-2.58
11,508.0	89.10	0.00	11,121.6	592.8	-3.9	592.8	5.63	4.69	3.13
11,570.0	90.00	0.00	11,122.1	654.8	-3.9	654.8	1.45	1.45	0.00
EOC- 11570.0 'MD, 90.00° INC, 0.00° AZI									
11,664.0	90.00	359.50	11,122.1	748.8	-4.3	748.8	0.53	0.00	-0.53
11,727.0	90.60	359.00	11,121.7	811.8	-5.2	811.8	1.24	0.95	-0.79
11,790.0	91.00	358.40	11,120.9	874.8	-6.6	874.8	1.14	0.63	-0.95
11,885.0	91.20	358.00	11,119.0	969.7	-9.6	969.8	0.47	0.21	-0.42
11,979.0	89.90	358.40	11,118.1	1,063.7	-12.5	1,063.8	1.45	-1.38	0.43
12,074.0	90.40	358.00	11,117.9	1,158.6	-15.5	1,158.7	0.67	0.53	-0.42
12,168.0	89.30	358.10	11,118.1	1,252.6	-18.7	1,252.7	1.18	-1.17	0.11
12,262.0	90.10	357.70	11,118.6	1,346.5	-22.2	1,346.7	0.95	0.85	-0.43
12,357.0	89.10	359.50	11,119.3	1,441.5	-24.5	1,441.7	2.17	-1.05	1.89
12,451.0	89.90	359.40	11,120.1	1,535.5	-25.4	1,535.7	0.86	0.85	-0.11
12,546.0	89.50	359.40	11,120.6	1,630.5	-26.4	1,630.7	0.42	-0.42	0.00
12,640.0	90.60	359.40	11,120.5	1,724.5	-27.4	1,724.7	1.17	1.17	0.00
12,734.0	90.30	0.00	11,119.8	1,818.4	-27.9	1,818.7	0.71	-0.32	0.64
12,829.0	90.90	359.90	11,118.8	1,913.4	-27.9	1,913.6	0.64	0.63	-0.11
12,923.0	90.00	0.00	11,118.1	2,007.4	-28.0	2,007.6	0.96	-0.96	0.11
13,018.0	90.90	0.00	11,117.3	2,102.4	-28.0	2,102.6	0.95	0.95	0.00
13,113.0	92.60	359.40	11,114.4	2,197.4	-28.5	2,197.6	1.90	1.79	-0.63
13,207.0	90.70	359.30	11,111.7	2,291.3	-29.6	2,291.5	2.02	-2.02	-0.11
13,302.0	89.80	358.60	11,111.3	2,386.3	-31.3	2,386.5	1.20	-0.95	-0.74
13,396.0	90.50	358.20	11,111.0	2,480.3	-33.9	2,480.5	0.86	0.74	-0.43

Company:	COG Operating LLC	**Local Co-ordinate Reference:**	Well #2H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3611.3usft (Original Well Elev)
Site:	Eata Fajita State	**MD Reference:**	WELL @ 3611.3usft (Original Well Elev)
Well:	#2H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,490.0	90.30	358.10	11,110.4	2,574.2	-37.0	2,574.5	0.24	-0.21	-0.11
13,585.0	90.70	358.40	11,109.6	2,669.2	-39.9	2,669.5	0.53	0.42	0.32
13,679.0	89.60	359.00	11,109.3	2,763.2	-42.0	2,763.5	1.33	-1.17	0.64
13,774.0	89.50	359.80	11,110.1	2,858.1	-43.0	2,858.5	0.85	-0.11	0.84
13,868.0	89.70	0.00	11,110.7	2,952.1	-43.2	2,952.5	0.30	0.21	0.21
13,962.0	88.70	359.00	11,112.0	3,046.1	-44.0	3,046.4	1.50	-1.06	-1.06
14,057.0	87.40	358.90	11,115.3	3,141.1	-45.7	3,141.4	1.37	-1.37	-0.11
14,151.0	88.50	359.70	11,118.6	3,235.0	-46.9	3,235.3	1.45	1.17	0.85
14,246.0	89.10	0.70	11,120.6	3,330.0	-46.6	3,330.3	1.23	0.63	1.05
14,340.0	89.70	1.30	11,121.6	3,423.9	-44.9	3,424.2	0.90	0.64	0.64
14,435.0	90.70	2.00	11,121.3	3,518.9	-42.2	3,519.1	1.28	1.05	0.74
14,529.0	89.10	1.30	11,121.4	3,612.9	-39.5	3,613.1	1.86	-1.70	-0.74
14,623.0	88.10	1.20	11,123.7	3,706.8	-37.4	3,707.0	1.07	-1.06	-0.11
14,718.0	88.70	0.90	11,126.4	3,801.8	-35.7	3,801.9	0.71	0.63	-0.32
14,812.0	88.70	0.00	11,128.5	3,895.7	-34.9	3,895.8	0.96	0.00	-0.96
14,906.0	90.30	359.30	11,129.3	3,989.7	-35.5	3,989.8	1.86	1.70	-0.74
15,001.0	91.60	359.10	11,127.7	4,084.7	-36.8	4,084.8	1.38	1.37	-0.21
15,095.0	91.30	358.60	11,125.4	4,178.6	-38.7	4,178.8	0.62	-0.32	-0.53
15,190.0	88.60	357.50	11,125.5	4,273.6	-42.0	4,273.7	3.07	-2.84	-1.16
15,284.0	89.90	358.30	11,126.7	4,367.5	-45.4	4,367.7	1.62	1.38	0.85
15,351.0	91.10	358.20	11,126.1	4,434.5	-47.4	4,434.7	1.80	1.79	-0.15
15,405.0	92.00	358.20	11,124.6	4,488.4	-49.1	4,488.7	1.67	1.67	0.00
BHL- 15405.0 'MD, 92.00° INC, 358.20° AZI - PBHL(EF#2H)									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
10,535.0	10,532.6	-20.2	26.4	KOP - 10535.0 'MD, 2.79° INC, 251.86° AZI
11,570.0	11,122.1	654.8	-3.9	EOC- 11570.0 'MD, 90.00° INC, 0.00° AZI
15,405.0	11,124.6	4,488.4	-49.1	BHL- 15405.0 'MD, 92.00° INC, 358.20° AZI

Checked By: _____ Approved By: _____ Date: _____

CONCHO

COG Operating LLC
Project: Lea County, NM
Site: Eata Fajita State
Well: #2H
Wellbore: OH
Plan: Plan #3 Post Gyro (#2H/OH)

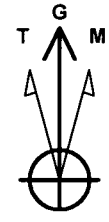
Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	10535.0	2.79	251.86	10532.6	-20.2	26.4	0.00	0.00	-20.6	
2	10643.5	2.79	251.86	10641.0	-21.9	21.4	0.00	0.00	-22.2	
3	11402.4	90.21	359.20	11125.0	457.1	-7.9	12.00	107.31	457.1	
4	15475.8	90.21	359.20	11110.1	4530.1	-64.8	0.00	0.00	4530.6	PBHL(EF#2H)

WELL DETAILS: #2H

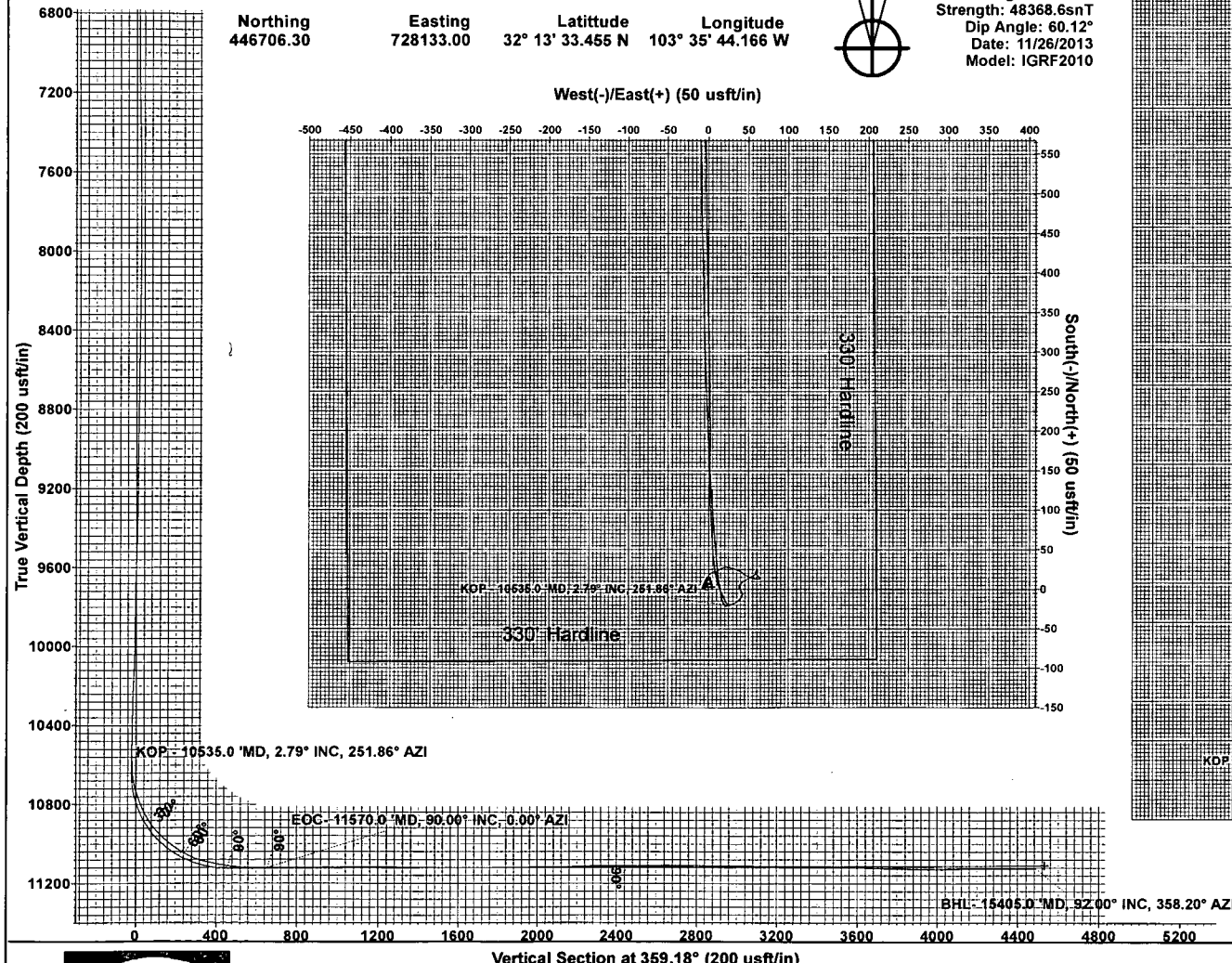
Ground Elevation:: 3589.3
RKB Elevation: WELL @ 3611.3usft (Original Well Elev)
Rig Name: Original Well Elev

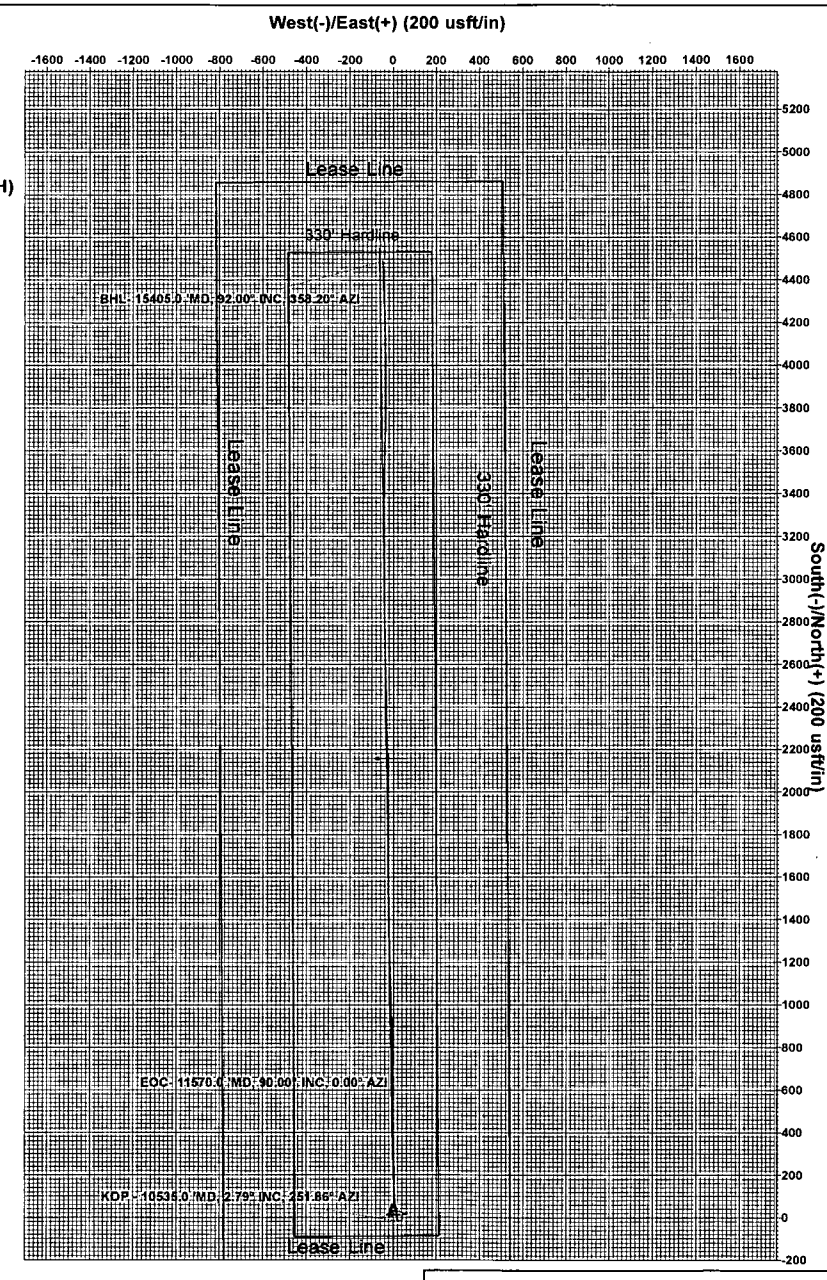
Northing	Easting	Latitude	Longitude
446706.30	728133.00	32° 13' 33.455 N	103° 35' 44.166 W



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.90°

Magnetic Field
Strength: 48368.6snT
Dip Angle: 60.12°
Date: 11/26/2013
Model: IGRF2010





PROJECT DETAILS: Lea County, NM
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid

Terra Directional Services LLC
322 Spring Hill Drive, Suite A300. Spring, Tx 77386
Phone: 432-425-7532

Plan: Plan #3 Post Gyro (#2H/OH)
Date: 13:32, December 26 2013